



# Removal Site Evaluation Former Building 3009 Site, COMNAVMARIANAS, Guam

Fact Sheet No. 3

August 2005

## INTRODUCTION

The former Building (Bldg.) 3009 site is located within the former United States (U.S.) Navy Public Works Center (PWC) maintenance compound. Bldg. 3009 is approximately 1,800 feet west of Inner Apra Harbor within Naval Base Guam in the area operated by Commander U.S. Naval Forces Marianas (COMNAVMARIANAS), as shown in Figure 1. The site consists of grass and concrete covered areas in the vicinity of former Bldg. 3009 as well as the drainage ditches located to the south and east. The northern boundary of the site consists of a large open area partially covered with concrete, asphalt, and grass (Figure 2).

The former Navy PWC operations performed electrical transformer maintenance for the entire western fleet in Bldg. 3009 from 1952 through 1977. Historically activities included repair, refilling, and storage of electrical transformers containing polychlorinated biphenyls (PCBs). PCBs are used as electrical insulators and were previously mixed in oil as a transformer coolant and lubricant. During operations, a storage tank next to Bldg. 3009 leaked PCB containing oil onto the ground. The Navy conducted several investigations and an interim cleanup action to address on-site PCBs.

## PREVIOUS SITE INVESTIGATION AND SOURCE CLEANUP

The first site investigation was conducted in 1982 by the Naval Energy and Environmental Support Activity (NEESA). NEESA reported PCBs in soil samples collected from the former storage tank area. NEESA also found PCBs in the soil in the drainage ditches bordering the southern and eastern limits of the site.

A second site investigation was conducted in 1989. Its purpose was to evaluate how much of the soil around the site had been impacted by the spill. PCBs were found to extend eastward in the drainage ditch south of the site and in soil near Bldg. 3009, up to 11 feet deep.

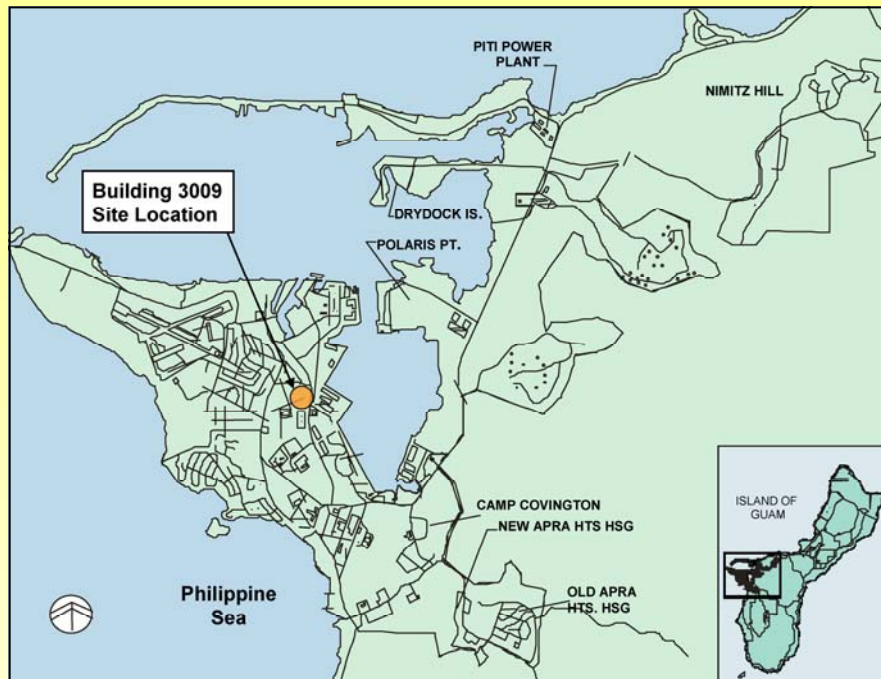


Figure 1: Vicinity Map

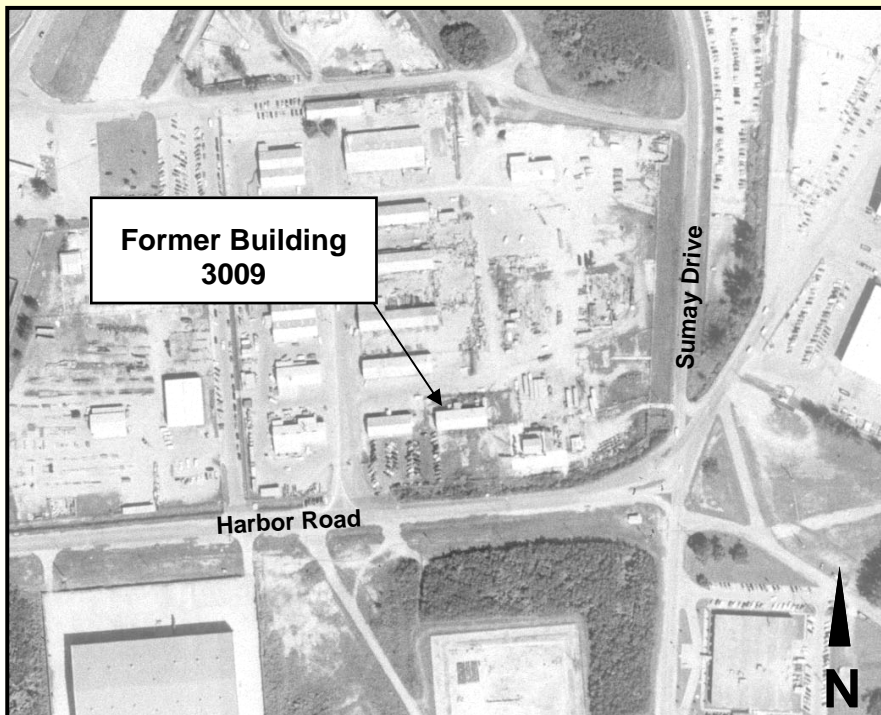


Figure 2: Site Aerial Photo (1994)

An interim removal action was conducted from 1993 to 1997 to remove PCB-contaminated soil with total PCB concentrations exceeding 25 milligrams/kilogram (mg/kg). Approximately 11,800 tons of soil was excavated from the site, treated on-site using a process that destroys PCBs present in soil, and returned to the site upon completion of verification sampling.

Following the interim treatment, the average PCB concentration was below the previously defined cleanup criteria (25 mg/kg) in three of the five treated areas.

In 1998, a follow-up investigation to the interim cleanup was conducted to further characterize the two areas that did not meet the interim cleanup criteria. This follow-up investigation identified subsurface soil PCB concentrations significantly above the cleanup criteria (25 mg/kg).

In 2004, an additional site investigation was performed to test surface and subsurface soils for PCBs in areas not

already sampled. Surface and subsurface soil samples were collected at 123 sampling locations. Investigation results identified the highest PCB concentration (210 mg/kg) in the surface soil adjacent to the areas recommended for removal in 1998. Surface soil PCB concentrations in the other areas across the site ranged from 0.0081 to 47 mg/kg. Groundwater was sampled for PCBs from four monitoring wells in the vicinity of the site on a semi-annual basis for one year. No PCBs were detected in the shallow groundwater.

PCBs in the surface soil were detected at concentrations above the 1 mg/kg screening criterion within the Bldg. 3004 Parking Lot (Area 3) and along the northern east edge of the sampling area (Area 5), which lies west of Sumay Drive, as shown on Figure 3. Based on these findings, additional sampling to identify the extent of PCBs in these areas is recommended as part of the removal site evaluation (RSE).



Figure 3: Locations exceeding 1 mg/kg of PCB in soil identified during the 2005 site investigation.

## REMOVAL SITE EVALUATION

In November 2005, the Navy will conduct field activities in support of a RSE for the former Bldg. 3009 site. The objectives of this investigation are to:

- Test surface soil and concrete chip samples for PCBs in areas beyond those previously investigated in the Bldg. 3004 Parking Lot (Area 3) and Area 5, as shown in Figure 4.
- Collect groundwater samples from the monitoring wells and compare results against ecological screening criteria to assess whether PCBs in groundwater are present at concentrations that may impact ecological receptors in Inner Apra Harbor.
- Provide data to conduct an Engineering Evaluation/Cost Analysis (EE/CA) to select an appropriate clean up remedy.

**Soil and Chip Sampling.** The Bldg. 3004 parking lot and Area 5 (Figure 4) will be divided into smaller areas that will be individually sampled. Approximately 70 soil and concrete chip samples will be collected randomly across each sampling area, which is composed of like materials (Figure 4). The sampling results will determine the extent of PCBs above 1 mg/kg across the site surface. These sampling results will supplement data from previous studies to identify PCB concentrations for the site and will be used to evaluate the extent of PCBs.

**Groundwater Sampling.** Groundwater samples will be collected from the four existing on-site monitoring wells and analyzed for PCBs, but at lower detection limits than the initial groundwater monitoring. The data gathered from this round of sampling will be used to confirm the initial non detect groundwater sampling results and will be compared to lower screening criteria to assess whether PCBs in groundwater are present at concentrations that may impact ecological receptors in Inner Apra Harbor.



Figure 4: Additional investigation areas identified for sampling during the RSE.

## REMOVAL ACTION

The results of this investigation will be used, in conjunction with results from previous site investigation and cleanup activities, to evaluate removal action alternatives for PCB-containing media observed at the site. These alternatives will be evaluated in an Engineering Evaluation and Cost Analysis (EE/CA). The alternatives presented in the EE/CA and the selected alternatives will be documented in an Action Memorandum (AM).

## SCHEDULE OF EVENTS

The schedule for upcoming site activities includes:

### *Site Investigation Report*

- Draft: September 2005
- Final: January 2006

### *RSE Planning Documents*

- Draft: August 2005
- Final: October 2005

### *RSE Field Investigation*

- November through December 2005

### *Engineering Evaluation/Cost Analysis Report*

- Draft: Spring 2006
- Final: Summer 2006

### *Action Memorandum*

- Winter 2006

### *Removal Action*

- Spring 2007



*RSE Investigation Area 3 (looking north toward Bldg. 3004)*

### *For More Information*

***Contact the Commander, U.S. Naval Forces Marianas (COMNAVMARIANAS) at (671) 339-5207 or Guam EPA at (671) 475-1658. Previous studies and reports on the Bldg. 3009 site are available at the Nieves M. Flores Library in Hagatna.***



*RSE Investigation Area 5 (looking south)*